

CLAIMS

What is claimed is:

1. A system for accessing data stored at a remote host in a computer network, comprising:

a proxy server having a code section including instructions for receiving a request for data from a client, and making a determination whether the requested data should be rendered before transmission to the client; and

a processing server coupled to the proxy server and having a code section including instructions for receiving the rendering determination from the proxy server, rendering the requested data, and transmitting the rendered data to the client.

2. The system of claim 1, wherein

the proxy server further comprises a code section including instructions for storing the requested data in an intermediate data store if it is determined that the requested data should be rendered before transmission to the client; and

the processing server further comprises a code section including instructions for retrieving data stored in the intermediate data store.

3. The system of claim 1, wherein

the proxy server includes a code section including instructions for transmitting address information to the processing server, wherein the address information corresponds to the storage location of the requested data at a data server; and

the processing server includes a code section containing instructions for retrieving the requested data from the data server.

4. The system of claim 3, wherein the proxy server further comprises
- a code section containing instructions for generating a link message containing address information corresponding to the requested data; and
  - a code section containing instructions for transmitting the link message to the client.
5. The system of claim 4, wherein the link message further includes data type information describing the requested data.
6. The system of claim 4, wherein the link message further includes a client identifier and a session identifier.
7. The system of claim 3, wherein the address information of the requested data comprises a URL and the data type information comprises a MIME type.
8. The system of claim 3, wherein the client further comprises a data handler including a code section containing instructions for establishing a communication link between the client and the processing server and for receiving the rendered data from the processing server.
9. The system of claim 1, wherein the proxy server includes a code section containing instructions for directly transmitting the requested data to the client upon the proxy server determining that the requested data do not have to be rendered before transmission to the client.
10. A computer-based method comprising:
- receiving a data request from a client at a proxy server;

evaluating the data request at the proxy server to determine whether data specified in the data request should be rendered;

generating a rendering request for transmission to a processing server upon the proxy server determining that data specified in the data request should be rendered before transmission to the client;

generating rendered data by rendering data at the processing server upon receiving said rendering request from the proxy server; and

transmitting the rendered data to the client.

11. The method of claim 10, comprising

retrieving the requested data from a data server;

storing the requested data in an intermediate data store upon the proxy server determining that the requested data should be rendered before transmission to the client; and

transmitting the requested data from the intermediate data store to the processing server.

12. The method according to claim 10, wherein

transmitting from the proxy server to the processing server address information corresponding to the location of the requested data on a data server; and

retrieving the requested data from the data server to the processing server using the address information.

13. The method of claim 10, comprising

generating a link message containing address information of the requested data; and

transmitting the link message to the client.

14. The method of claim 13, wherein the link message further includes address information of the processing server.
15. The method of claim 14, wherein the address information of the requested data comprises a URL.
16. The method of claim 13, wherein the link message further includes data type information describing the requested data.
17. The method of claim 16, wherein the data type information comprises a MIME type.
18. The method of claim 13, wherein the link message further includes a client identifier and a session identifier.
19. The method of claim 10, further comprising:
  - establishing a communication link between the client and the processing server; and
  - receiving the rendered data from the processing server.
20. The method of claim 10, further comprising transmitting the requested data directly to the client upon the proxy server determining that the requested data should not be rendered before transmission to the client.
21. The method of claim 10, comprising pre-selecting requests for data into a first category comprising requests wherein the requested data should be rendered, and a second category wherein the requested data should not be rendered;
  - transmitting requests in the first category to the proxy server; and

transmitting the requested data corresponding to requests in the second category directly to the client.

22. The method according to claim 10, wherein at least the proxy server, the processing server, and the intermediate data storage are connected on a local area network.
23. A computer-based method for accessing data in a computer network, comprising:
- receiving a request for data from a client at a proxy server;
  - determining whether the requested data have to be rendered before transmission to the client; and
  - authorizing a processing server to render the data at and to transmit the rendered data to the client.
24. The method of claim 23, further comprising
- retrieving the requested data from a data server;
  - storing the requested data in an intermediate data store upon the proxy server determining that the requested data have to be rendered before transmission to the client; and
  - authorizing the processing server to retrieve the data stored in the intermediate data store.
25. The method of claim 23, wherein
- the proxy server transmits address information of the requested data to the processing server, and
  - the processing server retrieves the requested data from a data server using the address information.

26. The method of claim 23, comprising  
generating a link message containing address  
information of the requested data; and  
transmitting the link message to the client.
27. The method of claim 26, wherein the link  
message further includes address information of the  
processing server.
28. The method of claim 27, wherein the address  
information of the requested data comprises a URL.
29. The method of claim 26, wherein the link  
message further includes data type information  
describing the requested data.
30. The method of claim 29, wherein the data type  
information is expressed using MIME data  
representations.
31. The method of claim 26, wherein the link  
message further includes a client identifier and a  
session identifier.
32. The method of claim 23, further comprising  
activating a data handler for establishing a  
communication link between the client and the  
processing server and for receiving the rendered  
data from the processing server.
33. The method of claim 23, further comprising  
directly transmitting the requested data to the  
client if the proxy server determines that the  
requested data do not have to be rendered before  
transmission to the client.
34. The method of claim 23, wherein the processing  
server may comprise any of a plurality of processing  
servers configured to render and transmit data, and  
the proxy server may receive data from a plurality

of clients and may retrieve data from a plurality of data servers.

35. A method for accessing data in a network, comprising:

receiving a message at a processing server to render data requested by a client;

retrieving the requested data from an intermediate data store;

transmitting the requested data to the processing server;

rendering the requested data at the processing server; and

transmitting the rendered data to the client.

36. The method of claim 35, wherein the processing server is instructed by a data handler running at the client to retrieve the requested data from the intermediate data store.

37. The method of claim 35, wherein the processing server

receives address information corresponding to the requested data, and

retrieves the requested data from a data server using the address information.

38. The method of claim 35, wherein the message to render data requested by the client is pre-selected.

39. A computer program product comprising a medium configured to store or transport computer readable code for a method comprising:

receiving a request for data from a client at a proxy server;

determining whether the requested data have to be rendered before transmission to the client;

rendering the data at a processing server; and  
transmitting the rendered data to the client.

40. A proxy server comprising:

a processor;

a memory connected to said processor, and  
containing

code containing instructions configured, upon  
execution of said instructions by the processor, to  
cause the proxy server

to receive a data request from a client;

to determine whether the data requested by the  
client should be rendered, and

to retrieve the requested data from a data  
server; and

to authorize a processing server to retrieve  
and render the requested data in accordance with the  
determination of the proxy server, and to transmit  
the rendered data to the client.

41. The proxy server of claim 39, wherein the  
memory further includes a code section containing  
instructions configured upon execution of said  
instructions by the processor to cause the proxy  
server

to store the requested data in an intermediate  
data store upon the proxy server determining that  
the requested data should be rendered before  
transmission to the client, and

to authorize the processing server to retrieve  
the data stored in the intermediate data store.

42. The proxy server of claim 39, wherein the  
memory further includes a code section containing  
instructions configured upon execution of said



instructions by the processor to cause the proxy server

to transmit address information of the requested data to the processing server, and

to instruct the processing server to retrieve the requested data from a data server using the address information.

43. The proxy server of claim 39, wherein the memory further includes a code section containing instructions configured upon execution of said instructions by the processor to cause the proxy server

to generate a link message containing the address information of the requested data, and to transmit the link message to the client.

44. The proxy server of claim 39, wherein the link message comprises

address information of the processing server, and

data type information describing the requested data.

45. The proxy server of claim 43, wherein the link message further comprises a client identifier and a session identifier.

46. The proxy server of claim 39, wherein the memory further includes a code section containing instructions configured upon execution of said instructions by the processor to cause the proxy server

to activate a data handler to establish a communication link between the client and the processing server, and

to receive the rendered data from the processing server.

47. The proxy server of claim 39, wherein the memory further includes a code section containing instructions configured, upon execution of said instructions by the processor, to cause the proxy server

to directly transmit the requested data to the client if the proxy server determines that the requested data do not have to be rendered before transmission to the client.

48. The proxy server of claim 39, wherein the processing server authorized by the proxy server comprises

a processor;

a memory operatively connected to said processor, and storing code containing instructions configured, upon execution of said instructions by the processor, to cause the processing server

to receive an instruction message to render data requested by a client;

to retrieve the requested data from an intermediate data store; and

to contain instructions for transmitting the rendered data to the client.

49. The proxy server of claim 47, wherein the memory of the processing server further includes code containing instructions configured, upon execution of said instructions by the processor, to cause the processing server

to receive an instruction message from a data handler at the client to establish a communication link between the client and the processing server.

50. The proxy server of claim 47, wherein the memory of the processing server further includes code containing instructions configured, upon execution of said instructions by the processor, to cause the processing server
- to retrieve the requested data based on address information corresponding to an intermediate data store.
51. The proxy server of claim 47, wherein the memory of the processing server further includes code containing instructions configured, upon execution of said instructions by the processor, to cause the processing server
- to retrieve the requested data based on address information from a data server.
52. The proxy server of claim 47, wherein the proxy server, the processing server, and the intermediate data store are connected by a local area network.